

5 **Fig.1. Schematic illustration of a
PVA retarder based uPol**

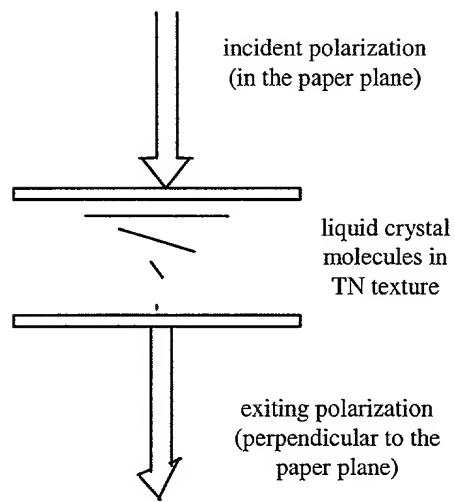


Fig.2. Optical rotation by a TN liquid crystal cell

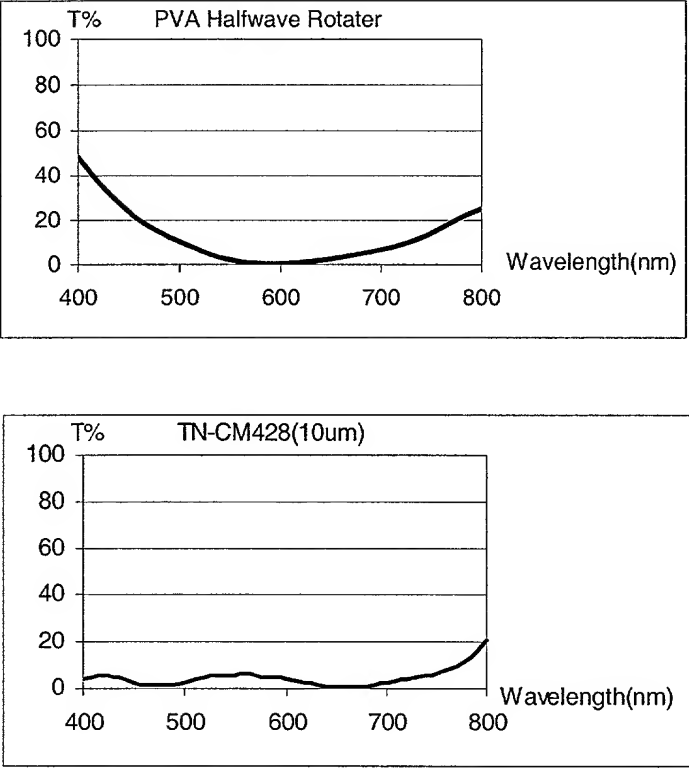


Fig. 3 Transmittances of PVA film and TN cell with wavelength

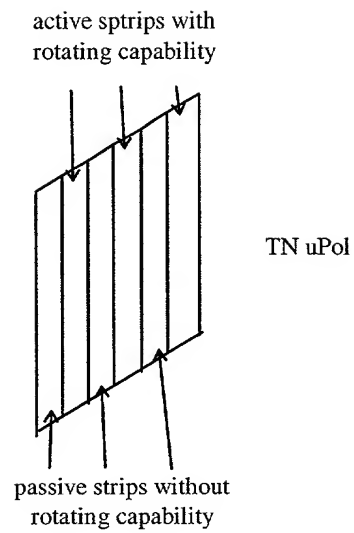


Fig.4. Schematic illustration of a TN based uPol

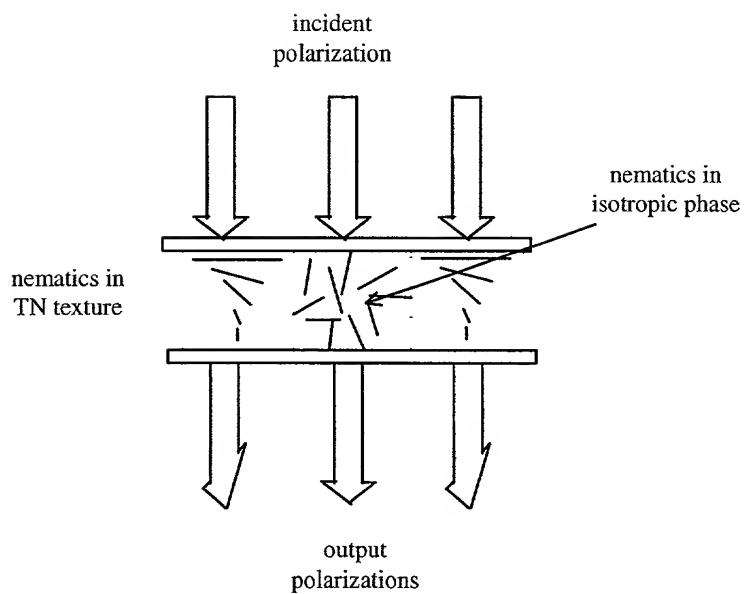


Fig.5. TN based uPol made with the UV mask method

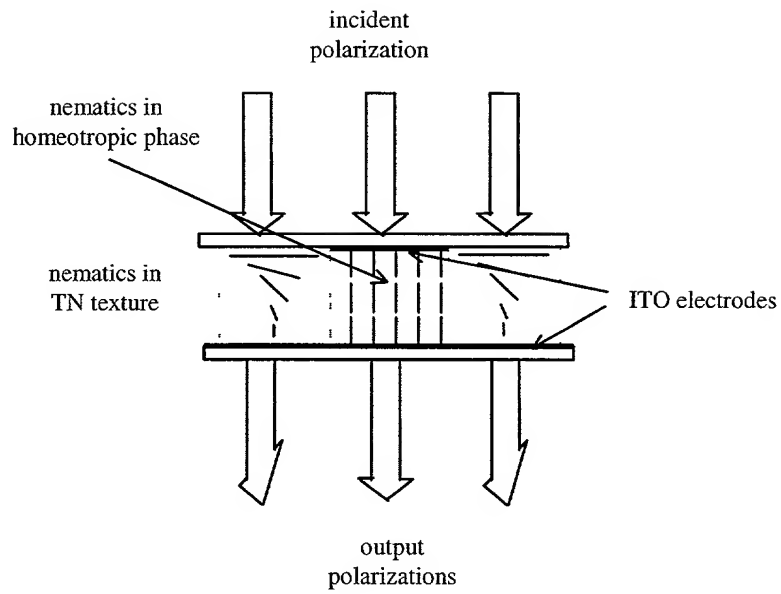


Fig.6. TN based uPol made with the E-field alignment method

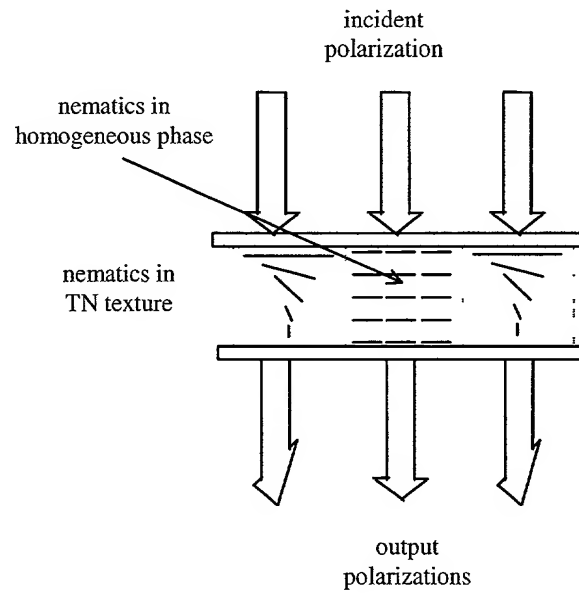


Fig.7. TN based uPol made with the multi-rubbing alignment method

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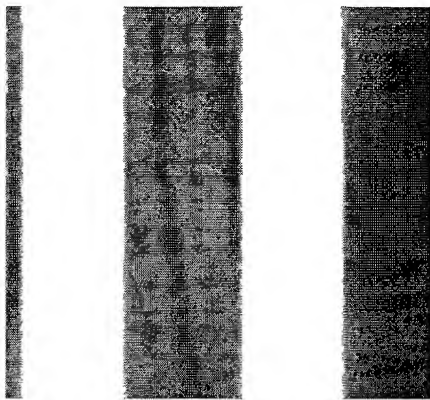


Fig. 8 TN uPol with 260um line width made by two-step UV exposure method

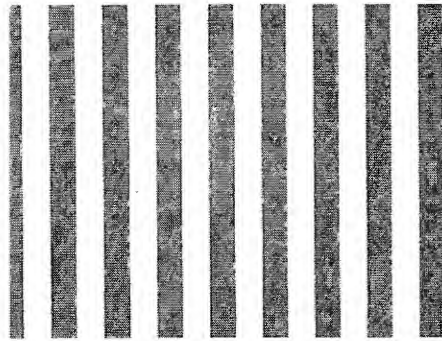


Fig. 9 TN uPol with 60um line width made by Multiple-Rubbing Method

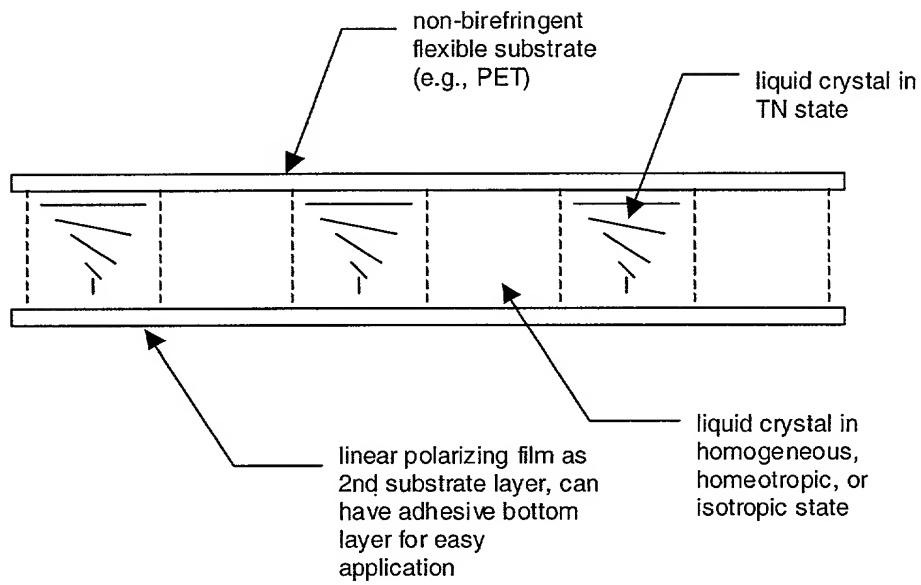


Figure 10. TN-Micropol Made Using a Flexible Linear Polarizing Sheet as One Substrate and a Non-Birefringent Sheet as the Other Substrate.

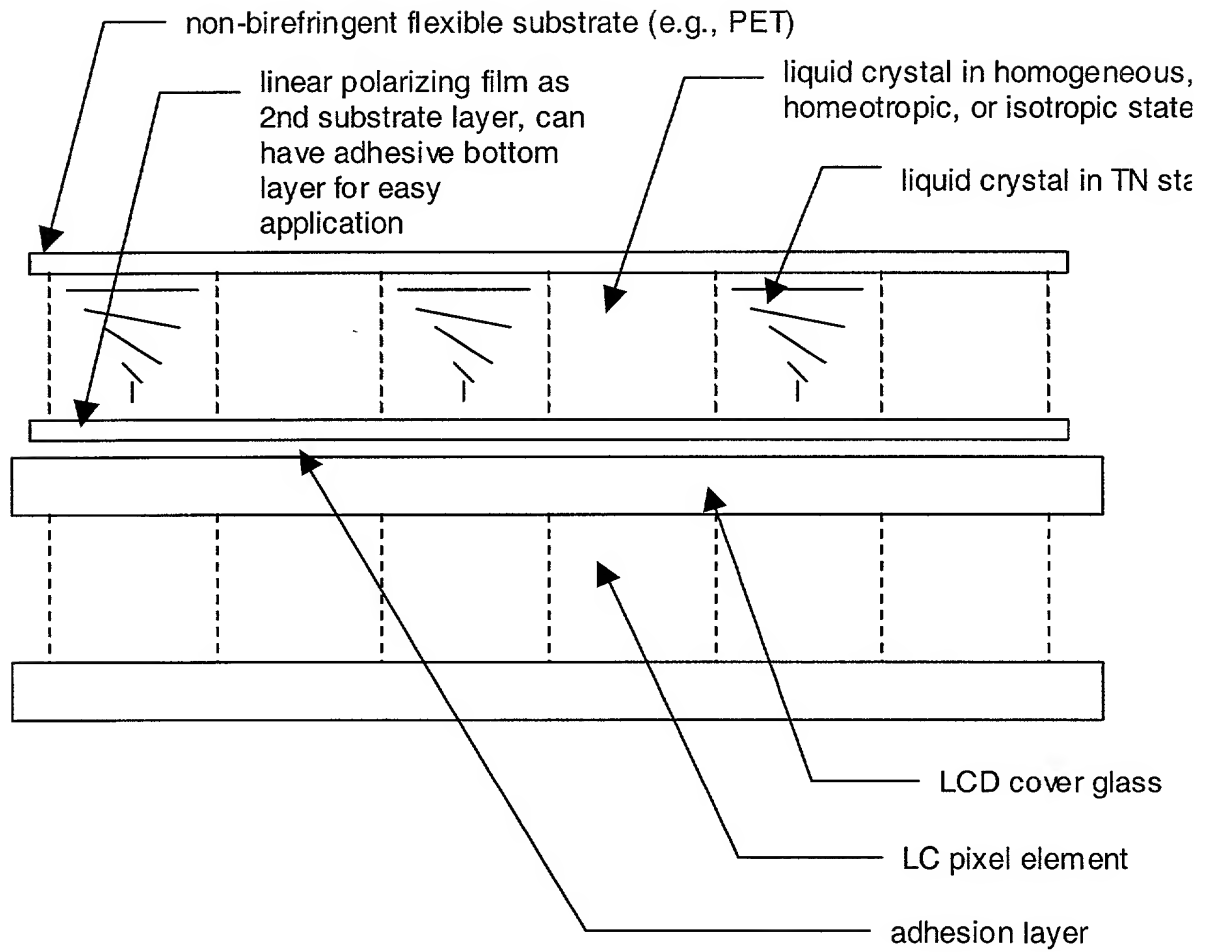


Figure 11.

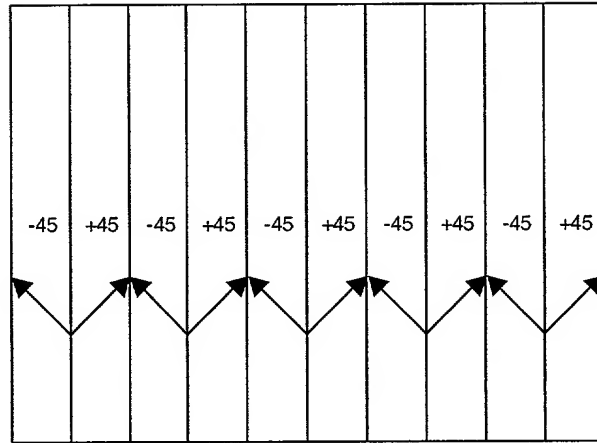


Figure 12 - 45-Degree Micropol

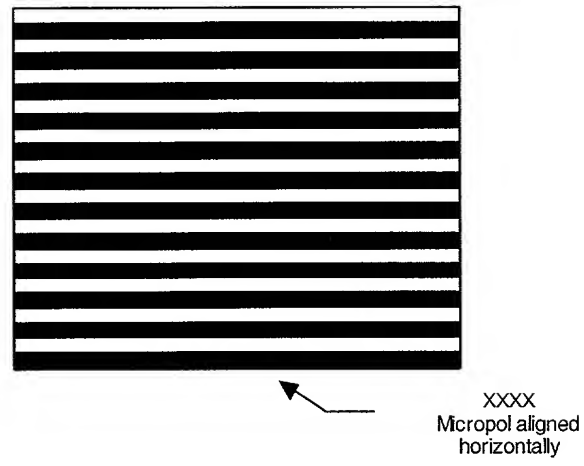


Figure 13 - Horizontally Aligned TN-Micropol

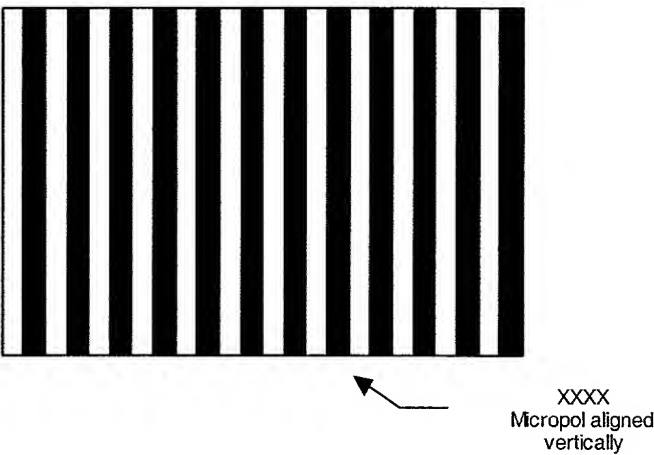
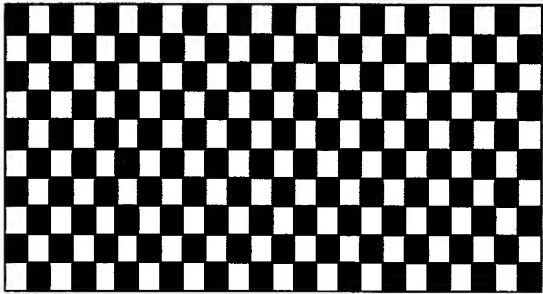


Figure 14 Vertically Aligned TN-Micropol for Vertical Display Pixel or Sub-Pixel Columns



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Checkerboard TN
Micropol

Figure 15 - Checkerboard TN-Micropol Aligned Vertically and Horizontally